REMARKS

Claims 1-9, 11-14 and 18, 19, 21 and 22 remain pending in the application.

Allowable Claims 1-9, 11-14, 21 and 22

The Applicant thanks the Examiner for the indication that claims 1-9, 11-14, 21 and 22 recite allowable subject matter.

Objection to claims 2-7, 12 and 14

Claims 2-7, 12 and 14 were objected to for noted informalities. Claims 2-7, 12 and 14 have been carefully reviewed and are amended appropriately herein. It is respectfully requested that the rejection now be withdrawn.

Section 112, Second Paragraph Rejection of Claims 13 and 14

Claims 13 and 14 were rejected as allegedly being indefinite. Claim 13 is amended herein to recite that the amplifier is a pull-down amplifier. It is respectfully requested that the rejection now be withdrawn.

Claims 18 and 19 over Harston

Claims 18 and 19 were rejected under 35 USC 103(a) as allegedly being obvious over U.S. Pat. No. 5,343,196 to Harston ("Harston"). The Applicant respectfully traverses the rejection.

Claims 18 and 19 are amended herein to recite a pull-down mirror path and a current switch that operate to ensure a constant current flow from the current source **to the load** so as to maintain a given current level produced by the current source.

The Examiner cites Fig. 3 of Harston as allegedly teaching "a method for reducing charge injection from a current source through a current switch into a load", though the Examiner agrees that Harston fails to show or disclose reduction of charge injection. (Office Action at 5)

Harston discloses the use of two PMOS transistors MP2, MP3 for connecting the drain of MP1 either to the output line 24 or to AGND 26. (Harston, col. 2, lines 60-63) Even if the circuit of Harston were to have been understood by a person of ordinary skill in the art as the Examiner suggests, it still would not have taught the present invention. Only one of the two switches MP1, MP2 that the Examiner refers to source current for a load. That's MP2. The other switch MP3 **shorts the circuit** into analog ground AGND. Thus, Harston clearly fails to maintain a given current level produced by the current source. Instead, it nails the current draw to the upper rail by shorting it to ground.

If the circuit of Fig. 3 of Harston were to be used as the Examiner alleges, charge injection would be problematic due to switching between the current source being maximized in current draw when shorted to AGND through MP3, and then switching to the capacitive load including a 37.5 ohm resistance and 10 pF capacitance.

Not only does Harston not teach the present invention, Harston teaches away from the present invention.

In particular, Harston teaches in its Summary of the Invention that current draw is not to be wasted. Thus, Harston teaches that both switches to the current source will be OFF, so that no wasted current can be drawn from the current source.

According to the present invention, the current source remains substantially constant whether or not it is passing current through to a load. (Specification, page 8, lines 19-23). Harston teaches no such control of the current source, and in fact teaches away from drawing current into a mirror path

as it would be wasteful of current.

Harston fails to teach or suggest a pull-down mirror path and a current switch that operate to ensure a constant current flow from the current source **to the load** so as to maintain a given current level produced by the current source, as recited by claims 18 and 19.

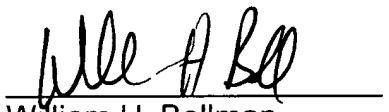
It would appear that the Examiner would agree that claims 18 and 19 as currently recited distinguish patentably from Harston. For instance, in the Office Action at page 6, the Examiner agrees that "switch MP2 is the only switch of Harston that provides current from current source MP1 to the load . . .." However, the Examiner felt that the claimed limitations as then presented did not clearly indicate that the other switch position provides current to the load. Claim 18 is now amended to explicitly articulate that the switch operates to ensure a constant current flow **to the load**.

For at least all the above reasons, claims 18 and 19 are patentable over the prior art of record. It is therefore respectfully requested that the rejection be withdrawn.

Conclusion

All rejections having been addressed, it is respectfully submitted that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,



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